

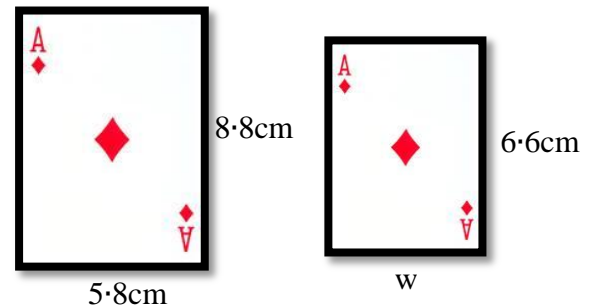
National 4 Homework 28

Questions 1, 4 and 6 are Non Calculator

1. Multiply out the brackets and simplify.

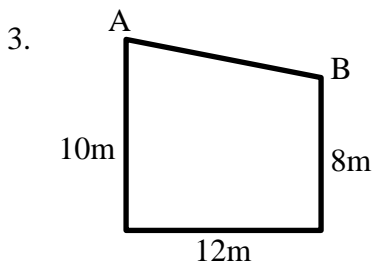
(a) $5(4-2x)-3$ (b) $7y+3(2y-6)$ (c) $6(3w+1)+2(7-w)$

2. The ace of diamonds in a pack of cards has a height of 8.8cm and a width of 5.8cm.
In a similar pack of smaller cards the ace has a height of 6.6cm.



(a) Calculate the scale factor of the reduction.

(b) Calculate the width, w, of the smaller ace.



The diagram shows a plan of Ian's garden.
He wants to put a fence along side AB.

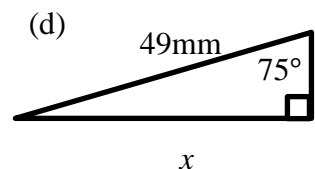
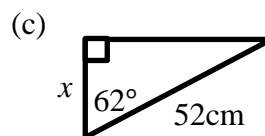
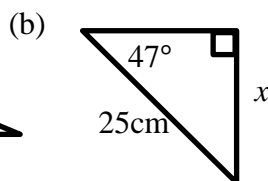
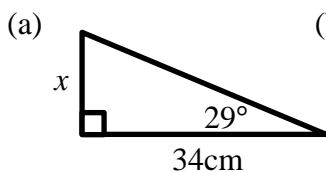
(a) Calculate the length of side AB.

(b) Fence wire comes in 5 metre rolls and costs £6.25 per roll.
How much will it cost Ian for the fence wire?

4. Change the subject of the formulae to the letter shown in brackets [].

(a) $P = \frac{W}{t}$ [W] (b) $F = PA$ [P] (c) $D = 3C + B$ [C] (d) $v^2 = u^2 + 2as$ [s]

5. Calculate the size of the sides marked x.



6. Solve for x.

(a) $5x-3 \geq 32$ (b) $8x+7 = 5x+34$ (c) $3(2x-4) = 60$ (d) $6x-2 = 48+x$

7. A plane is approaching Edinburgh airport.
The angle of elevation of the plane from the airport is 8°.
The plane is at a distance of 4km from the airport.
Calculate the height of the plane to the nearest metre.

